Just the Facts About ...

CSPS Update:11/03

Significant Progress in Sligo Creek Restoration: Sensitive Species Discovered

The most extensive and long term stream restoration effort undertaken so far in Montgomery County, Maryland has focused on Sligo Creek. As in many of the County's older, heavily developed areas, the Sligo Creek watershed posed special challenges. Many of the important headwater tributaries were long ago piped and/or eliminated, and much of the stream channel was highly eroded and filled with debris (Figure 1).

Figure 1. Wheaton Branch showing severe erosion and debris accumulation

When the restoration began, only two fish species remained which were able to survive the degraded habitat conditions in Montgomery County's portion of Sligo Creek. Since 1990, the Montgomery County Department of Environmental Protection has overseen the design and construction of over a dozen projects to add new stormwater runoff controls to 1,359 acres of upper watershed drainage (Figure 2), and restore habitat features in five miles of stream (Figure 3). Habitat restoration work included stream bank stabilization, rebuilding of long-absent stream riffle and pool habitat features, stream bank stabilization, streamside tree plantings, and the addition of vernal pools and wetlands (Figure 4). These habitat improvements enabled the viable reintroduction of fish and amphibian species long absent in Sligo Creek. Interagency partners in this effort included the Maryland National Capital Park and Planning Commission, the U.S. Army Corps of Engineers, and the Metropolitan Washington Council of Governments.

Currently there are over 20 fish species in other portions of the Anacostia River watershed that likely once also lived in Sligo Creek. However, existing barriers downstream and outside of the county prevented upstream re-colonization of these species in the improved Upper Sligo Creek habitat conditions. In the early 1990's, an interagency team of biologists, aided by neighborhood resident volunteers, began to reintroduce native species in the improved areas. Periodic monitoring conducted since then has shown that the majority of reintroduced species have been self-sustaining.

Today, 11 native species are known to be present in Sligo Creek. The diversity of the supported aquatic

Figure 2. Wheaton's highly acclaimed three-cell Stormwater Management Pond

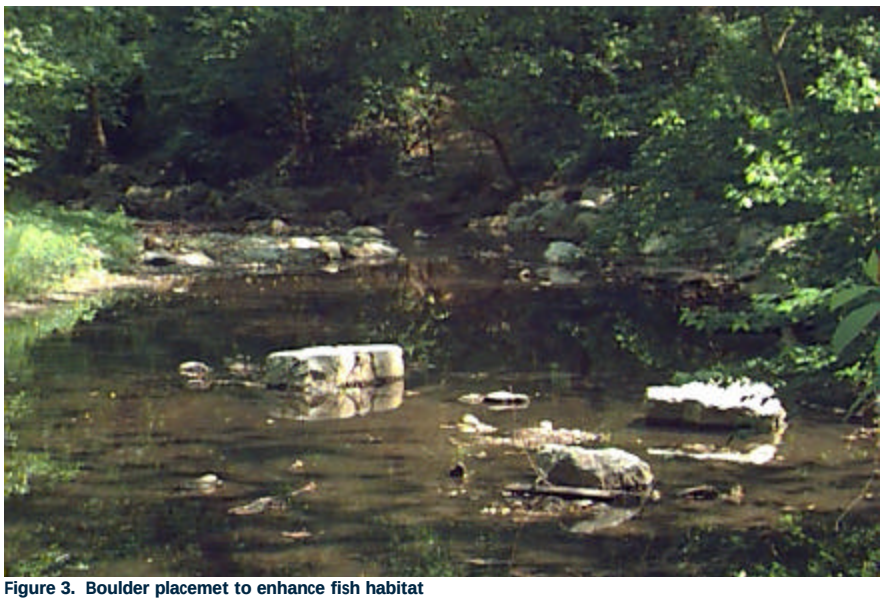

Figure 3. Boulder placemet to enhance fish habitat

insect communities also improved. However, record drought conditions caused many areas of Sligo Creek to segment and dry up, severely impacting resident fish populations. As a consequence, the 2003 Update to the *Countywide Stream Protection Strategy* (CSPS), based on 1994-2000 data, still rated Sligo Creek as being in the high end of a "poor" stream condition. This was primarily due to the presumed loss of the sensitive blue ridge sculpin species, which requires cool stream water for survival, and had not been seen in the watershed since 1998. However, newly available data from the spring 2003 fish sampling indicates the survival and reproduction of the blue ridge sculpin in the area of Sligo Creek around the Flora Lane tributary. This area receives regular infusions of cold, clean groundwater from the pumping operations of the Red Line Metro system. This surprising discovery is most encouraging, and indicates the potential of restored urban streams to support more diverse biological communities.

The next steps planned in Sligo Creek's restoration are the continued reintroduction of former resident native species, including any lost during the 1999 and 2001 drought. The species re-introduction plan will include a wider range of sensitive species, with the goal of raising the stream condition of the upper portions of Sligo Creek from "poor" to "fair" by the next CSPS update. The interagency team of biologists that planned the first fish reintroductions met recently with the Friends of Sligo Creek, a volunteer group dedicated to improving conditions in the watershed; plans are to collect and reintroduce fish during the late spring and early fall of 2004. Local residents and schools will be invited to help in this effort. Fish reintroductions will be made at several suitable habitat areas along Sligo Creek.

About CSPS Updates: Each year DEP monitors different watersheds as part of the baseline monitoring program. Stream data is continually updated as new information becomes available. For the latest information please go to **updates.askdep.com**.

Figure 4. Small constructed wetlands for quality control and amphibian habitat

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